IN THE CLAIMS:

Listing of Claims:

Claims 1-10 (Cancelled)

11. **(Currently Amended)** A starting circuit for switching power supplies, comprising:

a first terminal, a second terminal, and a third terminal that supplies voltage to circuits of a switching power supply;

a first supply voltage coming from ~~a~~ the first terminal;

a second supply voltage coming from a the second terminal ~~and a third terminal~~;

a first current path between the first terminal and the third terminal;

a second current path between the first terminal and the second terminal;

a third current path between the second terminal and the third terminal; and

a two-way voltage regulator placed along the second current path, wherein the two-way voltage regulator comprises a transistor with one terminal coupled to the first supply voltage and another terminal coupled to the second supply voltage, which, in a first operation mode allows current to flow from the first supply voltage to the second supply voltage and, in a second operation mode allows current to flow from the second supply voltage to the third terminal of the starting circuit. ~~having the drain coupled to the second terminal and the source coupled to the first and to the third terminal~~.

12. (Previously Presented) The starting circuit according to claim 11, wherein the two-way voltage regulator comprises a voltage limiting circuit supplied by the first supply voltage.

13. (Cancelled)

14. (Previously Presented) The starting circuit according to claim 11, wherein the two-way voltage regulator comprises a preset voltage generator coupled to the transistor gate.

15. (Previously Presented) The starting circuit according to claim 11, wherein the two-way voltage regulator comprises a capacitor coupled to the transistor gate.

16. (Previously Presented) The starting circuit according to claim 11, wherein the first current path comprises a resistance.

17. (Previously Presented) The starting circuit according to claim 11, wherein the first current path comprises a controlled switch.

18. (Previously Presented) The starting circuit according to claim 17, wherein the controlled switch is closed when the second supply voltage is lower than a preset reference voltage value and it is open when the second supply voltage is higher than the preset reference value.

19. (**Currently Amended**) A switching power supply comprising:

a control circuit for the switching power supply; and

a starting circuit of the control circuit, the starting circuit comprising:

a first terminal, a second terminal, and a third terminal that supplies voltage to circuits of the switching power supply;

a first supply voltage coming from ~~a~~ the first terminal;

a second supply voltage coming from ~~a~~ the second terminal ~~and a third terminal~~;

a first current path between the first terminal and the third terminal;

a second current path between the first terminal and the second terminal;

a third current path between the second terminal and the third terminal; and

a two-way voltage regulator placed along the second current path, wherein the two-way voltage regulator comprises a transistor with one terminal coupled to the first supply voltage and another terminal coupled to the second supply voltage, which, in a first operation mode allows current to flow from the first supply voltage to the second supply voltage and, in a second operation mode allows current to flow from the second supply voltage to the third terminal of the starting circuit. ~~having the drain coupled to the second terminal and the source coupled to the first and to the third terminal.~~

20. **(Currently Amended)** An integrated circuit for a switching power supply, the integrated circuit comprising:

a control circuit for the switching power supply; and

a starting circuit able to sustain a self supply voltage greater than 40 V, the starting circuit comprising:

a first terminal, a second terminal, and a third terminal that supplies voltage to circuits of the switching power supply;

a first supply voltage coming from a the first terminal;

a second supply voltage coming from ~~a~~ the second terminal ~~and a third terminal~~;

a first current path between the first terminal and the third terminal;

a second current path between the first terminal and the second terminal;

a third current path between the second terminal and the third terminal; and

a two-way voltage regulator placed along the second current path, wherein the two-way voltage regulator comprises a transistor with one terminal coupled to the first supply voltage and another terminal coupled to the second supply voltage, which, in a first operation mode allows current to flow from the first supply voltage to the second supply voltage and, in a second operation mode allows current to flow from the second supply voltage to the third terminal of the starting circuit. ~~having the drain coupled to the second terminal and the source coupled to the first and to the third terminal.~~